

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method of applying a digital watermark to a data file, the method comprising:

creating a pre-calculated set of elementary watermarks and a plurality of sections of the data file by

creating multiple copies of each section of the plurality of sections of the data file;

applying to each set of multiple copies a set of elementary watermarks such that each copy of a section contains a different elementary watermark; and

storing the elementary watermark containing copies of each section;

calculating a data file watermark on receipt of a request for supply of the data file;

selecting pre-calculated elementary watermarks equivalent to constituent portions of the data file watermark by comparing the constituent portions of the data file watermark with the pre-calculated elementary watermarks; and

constructing a watermarked data file by assembling selected elementary watermarks combined with the plurality of sections of the data file.

2. (currently amended) A method according to claim 1, wherein the calculating step the data file watermark comprises calculating a transaction specific watermark.

3. (currently amended) A method according to claim 2, wherein the calculating step the data file watermark comprises retrieving user data from a user database to construct the transaction specific watermark.

4. (original) A method according to claim 1, wherein the elementary watermarks are binary representations.

5. (currently amended) A method according to claim 1, wherein the constructing step the data file watermark comprises incorporating error correction data into the data file watermark.

6. (canceled)

7. (currently amended) A method according to claim 6 1, wherein the constructing step the data file watermark comprises accumulating a selected plurality of elementary watermark containing copies of the sections.

8. (currently amended) A method according to claim 1, wherein the creating step the pre-calculated set of elementary watermarks and a plurality of sections of the data file comprises:

calculating and storing the set of elementary watermarks;
and

calculating and separately storing the plurality of sections of data.

9. (currently amended) A method according to claim 8, wherein the constructing step the data file watermark comprises selecting each section of data and adding to it a pre-calculated elementary watermark selected by virtue of its correspondence with a constituent part of the data file watermark.

10. (original) A method according to claim 1, further comprising selecting sections of the data file most suitable for the addition of the elementary watermarks.

11. (currently amended) A method of implementing real-time transaction specific watermarking to generate a transaction specific digitally watermarked data file, the method comprising:

prior to receiving a transaction request for the data file:

dividing the data file into a plurality of sections;
and

creating a set of pre-calculated elementary watermarks;

creating multiple copies of each section of the plurality of sections of the data file;

applying to each set of multiple copies the set of elementary watermarks such that each copy of a section contains a different elementary watermark; and

storing the copies of the sections containing the elementary watermarks;

on receiving a transaction request for the supply of the data file:

calculating a transaction specific watermark;

selecting pre-calculated elementary watermarks equivalent to constituent portions of the transaction specific watermark by comparing the constituent portions of the transaction specific watermark with the pre-calculated units of data; and

constructing a transaction specific watermarked data file by assembling the selected pre-calculated elementary watermarks together with corresponding ones of the plurality of sections.

12. (canceled)

13. (currently amended) A method according to claim 11, wherein the creating step the pre-calculated elementary watermarks comprises:

calculating and storing the set of elementary watermarks;
and

separately storing the plurality of sections of data.

14. (currently amended) A method according to claim 13, wherein the constructing step the transaction specific watermarked data file comprises:

selecting each section of data and adding to it a pre-calculated elementary watermark selected by virtue of its correspondence with a constituent part of the data file watermark.

15. (currently amended) A data carrier comprising a computer program arranged to configure a computer to implement a method of applying a digital watermark to a data file, the method comprising:

creating a pre-calculated set of elementary watermarks and a plurality of sections of the data file by

creating multiple copies of each section of the plurality of sections of the data file;

applying to each set of multiple copies a set of elementary watermarks such that each copy of a section

contains a different elementary watermark; and
storing the elementary watermark containing copies of
each section;

calculating a data file watermark on receipt of a request for supply of the data file;

selecting pre-calculated elementary watermarks equivalent to constituent portions of the data file watermark by comparing the constituent portions of the data file watermark with the pre-calculated elementary watermarks; and

constructing a watermarked data file by assembling selected elementary watermarks combined with the plurality of sections of the data file.

16. (currently amended) An apparatus for applying a digital watermark to a data file, the apparatus comprising a processor adapted:

to create a pre-calculated set of elementary watermarks and a plurality of sections of the data file by

creating multiple copies of each section of the
plurality of sections of the data file;

applying to each set of multiple copies a set of
elementary watermarks such that each copy of a section
contains a different elementary watermark; and

storing the elementary watermark containing copies of
each section;

to calculate a data file watermark on receipt of a request for supply of the data file;

to select pre-calculated elementary watermarks equivalent to constituent portions of the data file watermark by comparing the constituent portions of the data file watermark with the pre-calculated elementary watermarks; and

to construct a watermarked data file by assembling selected elementary watermarks combined with the plurality of sections of the data file.

17. (new) A method of applying a transaction-specific digital watermark having N different elements to a data file, comprising:

dividing the data file into a plurality of sections, each section suitable to have an element of the watermark applied to it;

generating a set of N copies of each section of the data file;

applying to each copy of each set of copies a different one of the respective N elements;

generating, upon receipt of a request for a data file, the transaction-specific watermark; and

aggregating copies from the different sets of copies to create a data file to which the transaction-specific watermark has been applied.